EFFORTS TO MAKE THE LIVES OF THE WORKERS SAFER

Legislation Sought in This Country and in Europe to Prevent Unnecessary Industrial Diseases—Some Dangers to Employees Already Eliminated—Psychic Epilepsy of the Locomotive Engineer Latest Occupational Ailment

THAT psychic epilepsy may be a cause of railroad accidents has recently been pointed out by Dr. Irving Spear of Baltimore, the surgeon in charge of the Baltimore and Ohio Railroad hospital in that city. Psychic epilepsy is a disease which sometimes makes locomotive engineers temporarily oblivious of their surroundings and it may thus endanger their lives and the lives of others. Dr. Spear's purpose was to warn the railroad authorities of the country of this source of danger.

Psychic epilepsy is probably the latest of the many occupational diseases which the complexity of modern civilization has been for some time steadily developing. So numerous have these diseases become that they have attracted the attention of medical men throughout the world. Not only have medical men become interested, but labor and health bureau officials, sanitary inspectors, special investigators of labor problems and representatives of labor organizations are all working on the subject.

Not long ago the State of New York passed a law requiring physicians to report all cases of industrial poisoning from lead, phosphorus or mercury and all cases of compressed air illness which come within their practice. Henceforth 13,700 physicians, hospitals and dispensaries in New York State will be required to report all cases of occupational diseases which they are called upon to treat.

About thirty States have laws intended to protect workers from dust, unsanitary conditions and impure or poisonous air. Unfortunately the majority of these laws are too poorly worded to be altogether effective and too carelessly enforced to afford adequate protection. Much, however, has been accomplished.

National prohibition of the use of a poisonous substance in manufacturing occurred in this country for the first time this year, when Congress passed a law which forbids the use of poisonous phosphorus in the making of matches. This, it is believed, will abolish the match workers' disease known as phossy jaw. This disease is caused by the fumes and floating particles of phosphorus which attack the bones of the workers and especially their teeth. The bones become brittle, the teeth drop out, the jawbones decay, with the result, unless the disease is arrested, of the loss of one or both jaws or not infrequently death.

Dr. M. G. Overlock, medical inspector of factories in Massachusetts, is of the opinion that education can greatly aid in the prevention of industrial diseases. He believes that medical colleges will be obliged shortly to add departments for the study, diagnosis and treatment of industrial diseases.

Industrial clinics similar to those in successful operation in Milan, Italy, the doctor thinks, will soon be established here and he believes that industrial hygiene exhibits similar to the travelling exhibit recently sent out by the American Association for Labor Legislation should be used to stimulate those at the head of industrial establishments, particularly in the dangerous trades, to provide the best sanitary conditions.

A few years ago much was printed in the newspapers of this city in reference to the fatality of the bends or sandhogs' disease, which afflicts those obliged to work underground under a heavy air pressure, but much has been done since then by the medical men of this city toward lessening the dangers of employment in compressed air, and cases of the bends are by no means as frequent as formerly.

Chief among the remedies which have proved effective are physical examinations of all employees, shortening the hours of labor and hospitals in connection with all large underground operations where compressed air is used. In these hospitals, which are in charge of qualified attendants, victims of the bends can be immediately treated.

In Germany, England and France workers in dangerous trades are required to wash their hands and face before eating or leaving the factory. No food or drink or tobacco is allowed in workrooms.

In the dusty trades employees are required to take regular warm baths and the plants must be daily well cleaned. They must also be well lighted and ventilated.

Germany and England require employers in certain trades to keep health records of employees. In these countries and in France a medical certificate of fitness is required from every applicant for work in a dangerous trade. Physical examinations are frequent.

In some of these matters the United States is far behind foreign countries, but the American Association of Labor Legislation is making every effort to influence legislation along the same lines.

Those in charge of the association believe that the Government is responsible for and it alone can remedy many of the needlessly injurious conditions which produce the industrial diseases.

Although industrial diseases are found in some degree in every industry, from the largest to the smallest, there are certain well identified complaints which have become common, such as the hatter's shake, the potter's rot, the painter's colic and wrist drop, the caisson worker's bends, the match maker's phossy jaw, the brass worker's chills, the boiler maker's deafness, the glass blower's cataract, the miner's asthma and the blue gums of the lead workers. Those who are now working to prevent industrial diseases are directing their attention particularly at the moment to an amelioration of the conditions of the workers in these trades.

To illustrate the extent of the industrial diseases at the present time in the United States it is only necessary to state that there are not less than 13,000,000 cases of illness a year among those engaged in industrial employment. The Ohio State Accident Commission recently announced that 75 per cent. of the industrial injuries reported to that body should have been classified as occupational diseases.

When the Eads Bridge was built across the Mississippi River at St. Louis 600 men were employed in sinking the foundation. Of these 600 men 119, or 20 per cent., suffered from caisson disease and fourteen died.

The Brooklyn Bridge, while building, furnished within four months 110 cases of compressed air illness.

Victims of Poisoning.

During the past two years sixty deaths from lead poisoning have occurred in New York. Three-quarters of these deaths were due to the manufacture of white lead and the use of white lead in paints. As there are in the neighborhood of 150 trades in which workmen are in constant danger of poisoning from lead, cases of both acute and chronic lead poisoning are probably the most common of all the industrial diseases.

In the furrier's trade arsenical poisoning not infrequently occurs, and it has been a source of danger up to very recently in the manufacture of wall paper.

Many cases of blood poisoning come from the automobile factories, particularly from the department where men are engaged in "sanding the boxes." In Belgium this occupation of sand papering paint has been prohibited.

The disease known as "phossy jaw," which attacks the match makers, has been known since 1854. The number of lives that have been sacrificed in this occupation is large.

Out of door occupations are popularly regarded as healthful, nevertheless stone cutters, who usually work out of doors, but who breathe the dust from their work, die on an average about fifteen years ahead of their time. Gardeners and florists frequently suffer from dangerous inflammation of the hands and arms occasioned by contact with certain plants.

Butchers and slaughter house men unless very careful in their work may contract blood poisoning.

There are a number of mental and nervous diseases which may be called occupational. Psychic epilepsy is one of these. This epilepsy is directly caused by the fact that a person is moving at a speed too great for the physical organization. The human eye cannot adequately distinguish objects moving above a certain speed, nor can the conscious mental processes which make the engineer the master of the locomotive work normally above a certain speed. In the engineer's effort to do his work under such conditions a strain ensues which may cause fits of epilepsy of which the sufferer is not even aware. These fits show themselves in ten to twenty second periods of unconsciousness.

During that time the locomotive is practically in charge of a dead hand. In a train going eighty miles an hour a quarter of a mile can be passed without the sufferer from pyschic epilepsy being aware of anything around him. In that time a warning signal may be passed without being seen. This is a probable explanation of some disastrous wrecks.

Cigar makers, tailors, carpenters, laundry employees, jewellers, barbers, seamstresses, book binders, sewing machine operators, typewriters, dentists, pianists, violinists, telegraphers, all suffer in various ways from overuse of the hands and arms. Neuritis, neuralgia and cramps are frequent afflictions of these workers.

Mill workers who tend machines for long hours are said to contribute unduly to the State hospitals for the insane. There is a lead insanity, an alcoholic insanity and insanity caused by sulphurated hydrogen and a mental deterioration resulting from exposure to an excess of carbonic acid gas.

Germany, Denmark, Luxemburg, the Netherlands, Switzerland, France, Great Britain, Italy, Spain, Austria, Hungary and Sweden realizing the danger of this disease seven years ago took action similar to that which has recently been taken by Congress.

France has entirely forbidden after July 20, 1914, the use of white lead in any house painting process, either on the outside or the inside of buildings, thus doing away with white lead poisoning, a disease from which painters suffer.

Belgium prohibits the use of white lead in dry form and forbids the scraping off of lead paint by a dry process. The sale of white lead in the form of powder or cakes, except to specially authorized persons, is also forbidden. It is hoped that laws along similar lines will shortly be passed in this country.

Illinois to the Fore.

Illinois is one of the States prominently to the fore in the movement to guard the health and safety of employees. In Illinois employees engaged in processes involving the use of certain poisonous substances, such as lead and paris green, are protected by special precautions, while manufacturers of brass or smelters of lead must provide proper working clothes for employees. Dressing rooms and eating rooms must also be entirely separated from the rooms where the dangerous process is carried on, and every precaution must be taken to prevent poisonous dust and fumes from polluting the air. More important still, employees in dangerous processes must be examined by a physician once a month, the physician to be provided by the employer.

No other State so far has legislation of equal importance to the workers in dangerous industries. Massachusetts empowers her State Board of Health to rectify industrial conditions which may cause eye injuries to workers and to remove children from employment in dangerous processes.

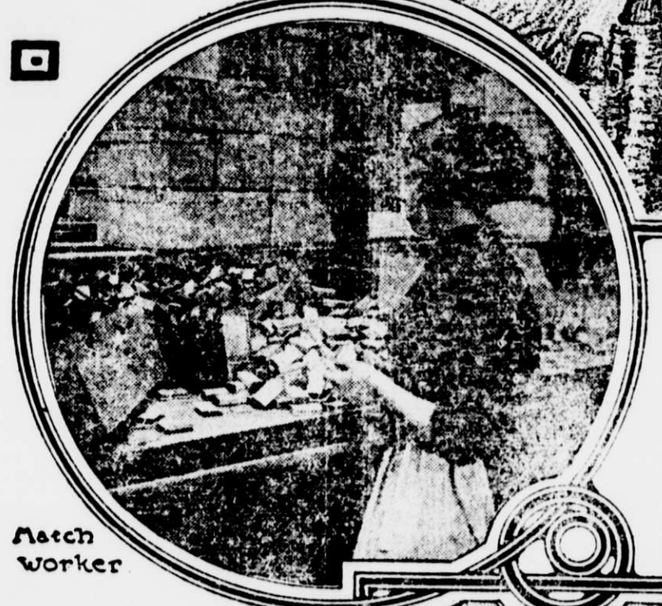
Eight American States, California, Connecticut, Illinois, Maryland, Michigan, New Jersey, New York and Wisconsin, require physicians to report cases of illness resulting from working in factories where common industrial poisons, such as lead, mercury and arsenic, are used.

Michigan, Minnesota, New York, Ohio and Oklahoma prohibit the employment of women in any occupation requiring constant standing.

Granite cutters

White lead worker dumping into the mill hopper.

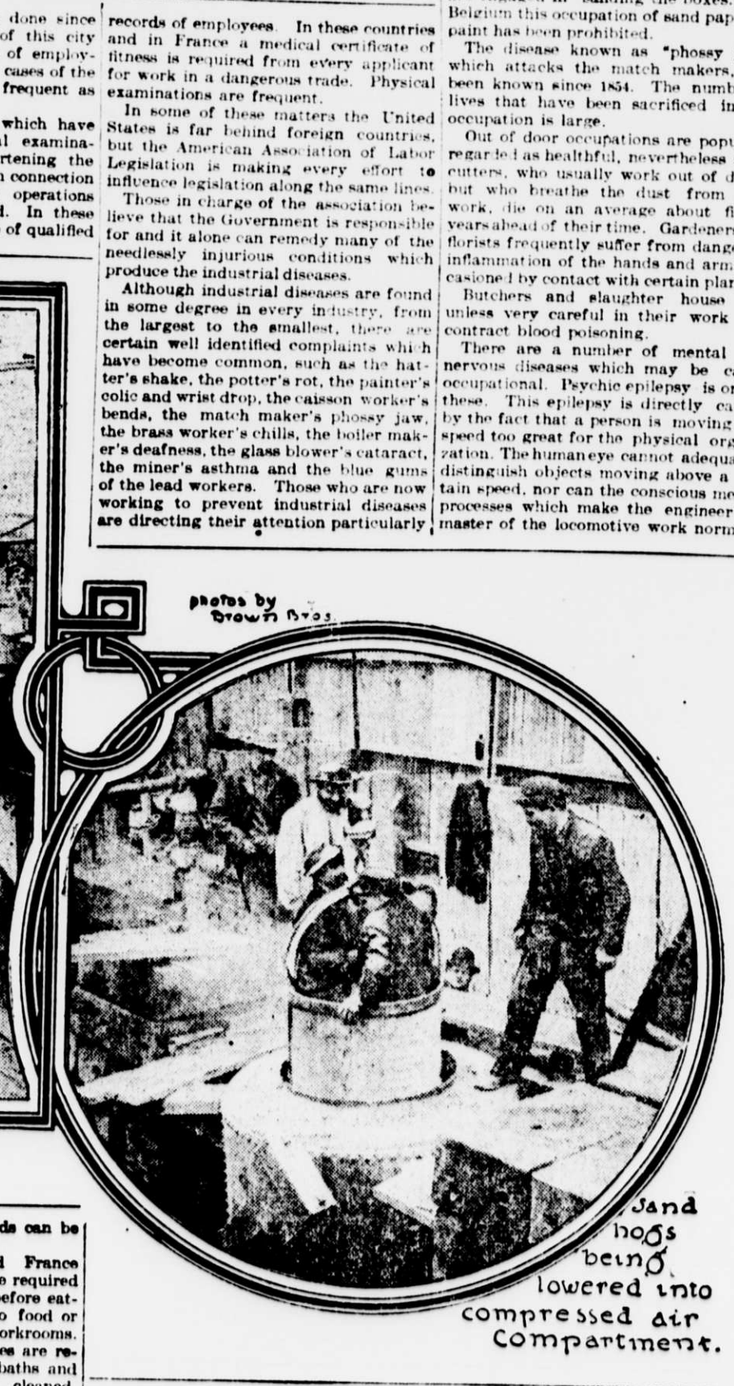
Emery and sand wheel workers.



Match Worker

Hat makers

photos by Brown Bros.



Sand hogs being lowered into compressed air Compartment.

THE BUSINESS GIRL OUTDOORS

In the business girl's catechism, under "My Duty Toward Myself," fresh air comes only just below rules for good conduct. And while fresh air is desirable in the winter time it is absolutely necessary in the summer, especially in the stifling city.

City people have to make a business of getting air and exercise. The girl who goes to and from her work in the underground subway, spends her working hours beneath a gas jet and sleeps in an apartment bedroom opening on a closed court will bleach out like a spring potato sprout in a cellar. The Great White Plague finds its victims among those who are starved of air and sunlight.

How can she get more air? First by sleeping with her bedroom windows wide open in all weathers. A hot water bottle or an extra blanket will keep her warm, and the air cannot be too cold for her lungs. After a few nights they will become accustomed to this feast of air and after that they will demand it.

Next by walking at least part way to her work whenever the weather is not unendurably cold or wet. If she lives four miles from her office it seems a futile thing to get up twenty minutes earlier in order to walk half a mile and then ride the rest of the way, but her mirror will soon tell her that the effort has not been wasted. And if need be she can go to bed half an hour earlier in the evening. Few girls get sleep enough.

By walking the girl gets not only air but exercise, and when some girl friend can share this morning walk it becomes one of the day's little pleasures.

In some of our great cities, notably New York, there are automobile stages with seats inside and on the roof. They charge a dime instead of a nickel for the ride, but when it is possible to make use of the outside seats they are not an extravagance, since they give a maximum of fresh air and the exhilaration of riding in one's own machine.

When the choice lies between the surface cars, the elevated and the subway they should be patronized in just that order. The surface lines do at least give some fresh air.

At noon time it is well to select a restaurant at a distance from the office. The walk will make the food, none too palatable at best, taste better. Perhaps there will be time for a little stroll before going back.

Saturday afternoon is the business girl's opportunity for fresh air, and she should never miss it. The matinée is no place to spend those golden hours when there is a park or a river or lake in the city. There with a friend or a book she may spend a happy afternoon watching the babies and feeding the squirrels. Or she may take the waist she is embroidering and go alone to some quiet nook where only the inquisitive squirrels will seek her out.

Sometimes two or three girls can do their sewing in this way while they get the air and perhaps listen to an absorbing story.

The park offers possibilities on Sunday afternoon also if it be large enough to afford room for a walk. Or perhaps there is a favorite street whose attractive homes with a bit of lawn are a change from the everlasting stone cañons of the business streets.

Where there is a lake or a river it is sometimes safe to vary the walk with a row or a ride on the regular boats.

Sometimes it seems best for a girl to spend her vacation at home. Perhaps her employer can spare her for only a day at a time or there may be other responsibilities that she cannot leave. But much health and happiness may be crowded into these scattered days at very small expense.

The seaside beach, so overcrowded and unattractive on Saturday afternoons and Sundays, offers morning possibilities. Perhaps an overworked mother or an eager little sister can go along. Sometimes there is a married friend who finds her days a little long now that she no longer goes to the office.

In any case the outing should be shared, for it is neither very safely nor very pleasantly taken alone. The ride on the strangely empty cars is pleasant, and after one arrives there is a choice of pleasures. Bathing is doubly agreeable when there is no one on the beach to see how badly the rented suit fits. And the surf is just as boisterous in the morning as in the afternoon. Afterward it is well to sit on the sand for a while and get thoroughly warm again.

Another amusement that has been too little understood by the city business girl is horseback riding. The horses that are for rent at the beaches at the rate of 10 cents a ride leave much to the imagination in the way of speed, but they are usually safe. And in the morning when they are not in use and yet fresh, one may be obtained for a very small sum. The first few experiences may not be an unmixed pleasure, but after the nervousness is gone there comes an exhilaration found in no other form of exercise.

A picnic lunch on the sand is amusing, and afterward there are the merry go rounds and the straggling crowd to watch. Then comes the trip home in the early evening before the crowds begin.

TUGBOAT LIFE IN HARBOR

Continued from Tenth Page.

a wicked 1,000 feet into the East River, a red buoy at the end.

There is more or less whooping of whistles, a crisis is imminent; then the situation has dissolved into thin air. The tows are out of the way just in time, the ferry comes in, we swing out and everybody satisfied.

Our forty-four cars are bound for the Lehigh Valley dock at the edge of the Morris Canal basin, close to the Jersey Central station. It was just to the south of us that the dynamite cars exploded last year, shaking all New York. Capt. Robert Barbour of the tug John Twohey was killed in that explosion. The boat was tied up half a mile away and had had nothing to do with the dynamite. His death was the latest fatality among the tugmen in the harbor.

There is plenty of dynamite about the harbor still, though it is handled with great caution. It is distributed by launches, little gray, low house craft, in the early morning, each flying a flag as big as her deck, which go scurrying about the harbor, much respected by all comers.

A fifty ton "battleship" coal car will weigh seventy tons with its load. Again and again while the coal strike was threatening the captain took forty-four of them up the East River, a total weight, coal, cars, floats and tug, of about 3,500 tons.

The steel railroad tugs like Transfer 22 are larger and more powerful than the ordinary wooden boats that do the miscellaneous shifting about the harbor. Twenty-two has a double decked pilot house so that the captain is up where he can see over the tops of his floats.

She can go to sea, though that is not her business. With her bunker plates screwed down in her deck she is "as tight as a can buoy," as the captain says. He tells how they brought her down from the Fore River yards at Quincy in May three years ago, when he woke up in the middle of the night to find a pitcher of water in bed with him and the tug doing everything but stand on her head.

He dodged outside between swells and made out what had happened. A souther had blown up suddenly and the swift tide setting out of Vineyard Sound met it and kicked up an abomination of a swell. The tug thought nothing of the matter and made the run through it all in twenty-two hours from Boston to New York. The twenty knot Boston fliers do only a few hours better in fair weather.

Ice breaking is another of the miscellaneous duties which the tugs have thrust upon them. The captain went up to Yonkers last January when the river was frozen and a big Norwegian freighter, the Lif, lay off Fort Washington Point with her bow crumpled, refusing to try further. It was rip and bang through heavy ice all the way up, but the tug did it.